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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/553,870

10/21/2005

Satoru Nishiuma

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08/03/2009

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EXAMINER

WEISZ, DAVID G

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

08/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,870	Applicant(s) NISHIUMA, SATORU	
	Examiner DAVID WEISZ	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. RCE filed on 07/10/09 and amendment filed 6/11/09 are acknowledged. Upon entering the amendment, claim 1 is amended. Claims 1-9 are pending and presented for the examination.

Response to Amendment

2. Grounds for rejection were modified in view of the amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Danielzik et al. (US 5822472, IDS) (Danielzik) in view of Pilevar et al (US 6558958, IDS) (Pilevar).

Danielzik discloses an optical analysis device comprising an external face capable of immobilizing a detection-objective substance (*col3/26-50*) (*claim 7*), a first end and a second end (*figure 1*), a light separating means at an end for separating exciting light from fluorescent light, wherein exciting light is entered from another end and fluorescent light is generated from detection-objective substance, and a detecting

means (*col3/126-50*) (*claim 1*). The reference additionally discloses a light separating means that is a coupling grating (*col3/126-50*) (*claim 2*). The reference additionally discloses the light-transmitting member to comprise an optical waveguide (*col3/126-50*) (*claim 3*). The reference additionally discloses a flow path within the device having an inlet and outlet (*figure 1*) (*claim 4*). The reference additionally discloses a coupling means that is a diffraction grating at a first end of the device (*Col3/126-50*) (*claims 5 and 6*). The reference additionally discloses that the trapping component traps via antigen-antibody reaction (*col11/124-42*) (*claim 8*) or a hybridization reaction of DNA (*col10/135-40*) (*claim 9*). However, the reference does not specifically disclose the light transmitting member to be cylindrical, or that fluorescing light is condensed before detection, as disclosed in claim 1.

Pilevar discloses a cylindrical columnar light transmitting member in an optical device (*figure 7*). The reference additionally discloses that the fluorophores couple with material within the optical fiber, and that when fluorescence occurs, the fluorescing light is coupled for detection (*abstract*) (*claim 1*). It would have been obvious to one having ordinary skill in the art to use a cylindrical columnar device for the device of Danielzik because, although they are of different shapes and configurations, they have the same mechanism of detecting fluorophores via immobilization and subsequent fluorescent detection. Additionally, it would have been obvious to couple the fluorescing light within the device of Danielzik in order to properly capture it for analysis.

Response to Arguments

6. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection. However, on pages 6 and 7 of Applicant's arguments, it is stated that the optical sensor of the Pilevar reference lacks an external face for detection-objective substance immobilization and a condenser. Firstly, as disclosed in the 103 rejection above, both the Danielzik and Pilevar references have an immobilization step, with the Danielzik immobilization layer situated externally. One of ordinary skill in the art would situate a fluorophore immobilization

Art Unit: 1797

material in a variety of places convenient for an optical analysis device of a variety of configurations. With respect to the condenser, please reference the above rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID WEISZ whose telephone number is (571)270-7073. The examiner can normally be reached on Monday - Thursday, 7:30 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571)272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/31/2009

/Yelena G. Gakh/
Primary Examiner, Art Unit 1797

/D. W./

Examiner, Art Unit 1797